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EXAMINER

ANWAH, OLISA

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,133

Applicant(s)

HOGAN ET AL.

Examiner

Olisa Anwah

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/22/6.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 5,11,24,25 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-10,12,15-23,26-28,30-32,34-41 and 43-49 is/are rejected.
- 7) ☐ Claim(s) 2,13,14,32,33 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 23 and 26 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter. According to MPEP 2106, data structures not claimed as embodied in computer-readable media are descriptive material *per se* causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held non-statutory) Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

Claims 23 and 26 recite a location updating message comprising various message fields. The claimed location updating message has no functional interrelationship between itself and other claimed aspects of the invention and the claimed message fields are not capable of causing functional change in the claimed invention.

Claim Objections

3. Claim 32 is objected to because the phrase "Apparatus for use in mobile terminal" should be replaced with "Apparatus for use in a mobile terminal".

4. Claim 2 is objected to because the phrase "location area update accept messages" should be replaced with "location area update accept message".

5. With further respect to claim 2, the term "wherein" should be deleted because it suggests or makes optional but does not require the claimed receiving limitation to be performed. Claim 42 has the same problem.

Claim Rejections - 35 USC § 102(e)

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty

Art Unit: 2614

defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

7. Claims 1, 3, 8-10, 12, 15, 17-23, 26-28, 31, 32, 34, 35, 37-41, 43 and 45-49 are rejected under 35 U.S.C. § 102(e) as being anticipated by Monroe, U.S. Patent No. 2002/0111166 (hereinafter Monroe).

Regarding claim 1, Monroe discloses a method implemented in a mobile radio terminal for reducing signaling associated with the mobile radio terminal selecting a new geographic coverage area, comprising:

receiving from a radio access network information indicating a list of one or more geographic coverage areas from which the mobile radio terminal may not obtain service;

storing the list of one or more geographic coverage areas;

checking the received information when considering whether to request service from a new geographic coverage area including checking the stored list prior to performing a subsequent geographic coverage area update; and

determining whether to select a geographic coverage area depending on the received information including determining

Art Unit: 2614

whether to perform a location area update procedure based on the checked list (see Figures 2-4).

Regarding claim 3, see paragraphs 0048 and 0054.

Regarding claim 8, see paragraphs 0048 and 0054.

Regarding claim 9, see paragraphs 0048 and 0054.

Regarding claim 10, Monroe discloses a method implemented in a cellular communications system including a radio access network for serving plural geographic coverage areas comprising:

- receiving a message from a mobile radio terminal, and
- sending to the mobile terminal information indicating a list of the geographic coverage areas from which the mobile radio terminal may not request service,

wherein the mobile terminal uses the information to reduce signaling between the mobile terminal and the radio access network by not performing a geographic coverage area update procedure for a geographic coverage area included in the list (see Figures 2-4).

Regarding claim 12, see paragraphs 0048 and 0054.

Art Unit: 2614

Regarding claim 15, see paragraphs 0048 and 0054.

Regarding claim 17, see paragraphs 0048 and 0054.

Regarding claim 18, see Figure 1.

Regarding claim 19, see Figure 1.

Regarding claim 20, see Figure 1.

Regarding claim 21, see Figures 2-4.

Regarding claim 22, se Figure 1.

Regarding claim 23, Monroe discloses a location updating message transmitted from a radio access network over a radio interface to a mobile radio terminal, comprising:

- a location updating message type field;

- a location area identification field;

- a mobile terminal identification field; and

- a location area field indicating location areas that the mobile terminal may or may not select;

wherein the message is a location updating reject message (see paragraph 0048).

Regarding claim 26, see Figures 2-4.

Regarding claim 27, Monroe discloses a method for use in a cellular radio communications system including a core network

Art Unit: 2614

coupled to a radio access network communicating information with mobile radio terminals over a radio interface, comprising:

- storing a list of forbidden location areas for a group of mobile terminals;

- receiving a communication from one of the mobile terminals in the group;

- sending the list of forbidden location areas to the one mobile terminal;

- the one mobile terminal receiving and storing the list of forbidden location areas; and

- the one mobile terminal checking the list of forbidden location areas and not performing a location area update operation for a location area that is on the list of forbidden location areas in order to reduce signaling between the mobile terminal and the radio access network (see Figures 2-4).

Regarding claim 28, see paragraphs 0048 and 0054.

Regarding claim 31, see paragraphs 0048 and 0054.

Regarding claim 32, Monroe discloses an apparatus for use in a mobile radio terminal, comprising:

Art Unit: 2614

radio transceiving circuitry configured to receive from a radio access network information indicating a list of one or more geographic coverage areas from which the mobile radio terminal may not obtain service, and

electronic circuitry configured to perform the following tasks:

check the stored list prior to determining whether to perform a geographic coverage area update, and

determine not to perform a geographic coverage area update based on the checked list in order to reduce signaling between the mobile radio terminal and the radio access network (see Figures 2-4).

Regarding claim 34, see paragraphs 0048 and 0054.

Regarding claim 35, see paragraphs 0048 and 0054.

Regarding claim 37, see paragraphs 0048 and 0054.

Regarding claim 38, see paragraphs 0048 and 0054.

Regarding claim 39, see paragraphs 0048 and 0054.

Regarding claim 40, Monroe discloses radio access network apparatus for use in a cellular communications system including a radio access network serving plural geographic coverage areas, comprising:

radio transceiving circuitry configured to receive a message from a mobile radio terminal, and

data processing circuitry configured to provide information indicating a list of geographic coverage areas from which the mobile terminal may not request service,

wherein the mobile radio terminal uses the information to reduce signaling between the mobile radio terminal and the radio access network by not performing a geographic coverage area update procedure for a geographic coverage area included in the list (see Figures 2-4).

Regarding claim 41, see paragraphs 0048 and 0054.

Regarding claim 43, see paragraphs 0048 and 0054.

Regarding claim 45, see Figures 2-4.

Regarding claim 46, see Figures 2-4.

Regarding claim 47, see paragraphs 0048 and 0054.

Regarding claim 48, see paragraphs 0048 and 0054.

Regarding claim 49, see paragraphs 0048 and 0054.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2614

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 6, 7, 16, 30, 36 and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Monroe in view of Amin, U.S. Patent No. 7,003,299 (hereinafter Amin).

Regarding claim 6, Monroe teaches the information indicates one or more geographic coverage areas belonging to an operator that does not provide service to the mobile radio terminal (see paragraphs 0048 and 0054). Monroe does not explicitly mention first and second operators share the radio access network. Regardless, Amin discloses this feature (see column 1). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Monroe with the shared network of Amin. This modification would have improved the efficiency of Monroe by allowing service providers to share the basic resources of a telecommunications network infrastructure while allowing each service provider to customize the services and features provided to its subscribers as suggested by Amin (see column 2).

Regarding claim 7, see paragraphs 0048 and 0054.

Claim 16 is rejected for the same reasons as claim 6.

Regarding claim 30, Monroe teaches the list of forbidden location areas indicates one or more geographic coverage areas belonging to an operator that does not provide service to the mobile radio terminal (see paragraphs 0048 and 0054). Monroe does not explicitly mention first and second operators share the radio access network. Regardless, Amin discloses this feature (see column 1). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Monroe with the shared network of Amin. This modification would have improved the efficiency of Monroe by allowing service providers to share the basic resources of a telecommunications network infrastructure while allowing each service provider to customize the services and features provided to its subscribers as suggested by Amin (see column 2).

Claim 36 is rejected for the same reasons as claim 7.

Claim 44 is rejected for the same reasons as claim 6.

10. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Monroe in view of Hronek, U.S. Patent No. 6,564,055 (hereinafter Hronek).

Art Unit: 2614

On the issue of claim 4, nowhere does Monroe indicate the claimed limitation of receiving updated information from the radio access network. All the same, Hronek shows this feature (see column 3). For this reason, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Monroe with the updating mechanism of Hronek. This modification would have improved the efficiency of Monroe by reducing the burden on the network infrastructure as suggested by Hronek (see column 3).

Allowable Subject Matter

11. Because Monroe does not teach the information is received in a location area update accept message, claims 2 and 42 would be allowable if rewritten to overcome the objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. Because Monroe does not teach the information is received in a location area update accept message, claims 13 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

13. Applicant's arguments have been considered but are deemed to be moot in view of the new grounds of rejection.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olisa Anwah whose telephone number is 571-272-7533. The examiner can normally be reached on Monday to Friday from 8.30 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 571-273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Application/Control Number: 09/933,133

Page 14


Art Unit: 2614

O.A-

Olisa Anwah

Patent Examiner

May 15, 2006



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER